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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/769,137	01/30/2004	Sherif Yacoub	200310012-1	8264

7590 02/22/2007

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EXAMINER	
GAUTHIER, GERALD	
ART UNIT	PAPER NUMBER
2614	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/769,137	YACOUB ET AL.	
	Examiner	Art Unit	
	Gerald Gauthier	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 March 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/12/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim(s) 23 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. "A computer-usable medium" is directed to a judicial exception to 35 U.S.C. 101 (i.e., an abstract idea, natural phenomenon, or law of nature) and is not directed to a practical application of such judicial exception (e.g., because the claim does not require any physical transformation and the invention as claimed does not produce a useful, concrete, and tangible result.

Claim(s) 1-22 and 24-26 are rejected under 35 U.S.C. 101 because the computer usable medium is running the methods associated with the independent claims.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claim(s) 1-14 and 17-26** are rejected under 35 U.S.C. 102(e) as being anticipated by Cohen et al. (US 2002/0095295 A1).

Regarding **claim(s) 1**, Cohen discloses a method for extracting demographic information (paragraph 0002), comprising:

initiating a dialog between a contact and a call handling system (paragraph 0023);

selecting a set of demographic characteristics (paragraph 0021);

assigning a set of acoustic confidence scores to the demographic characteristics (paragraph 0024);

assigning a set of substantive confidence scores to the demographic characteristics (paragraph 0044);

combining the acoustic and substantive confidence scores for each of the demographic characteristics (paragraph 0048); and

tailoring information presented to the contact using the set of combined confidence scores (paragraph 0058).

Regarding **claim(s) 2**, Cohen discloses a method, wherein assigning substantive confidence scores includes: presenting the contact with a first substantive dialog (paragraph 0044);

collecting a set of responses to the first substantive dialog from the contact (paragraph 0044);

comparing the contact's responses to a predefined body of responses associated with the set of demographic characteristics (paragraph 0044); and

assigning a first set of substantive confidence scores to the demographic characteristics (paragraph 0046).

Regarding **claim(s) 3**, Cohen discloses a method, wherein presenting includes: continuing to present the contact with the substantive dialog until one of the substantive dialog confidence score reaches a predetermined value (paragraph 0044).

Regarding **claim(s) 4**, Cohen discloses a method, wherein presenting includes: continuing to present the contact with the substantive dialog until a predetermined time period has expired (paragraph 0046).

Regarding **claim(s) 5**, Cohen discloses a method, wherein presenting includes: presenting the substantive dialog to the contact when the contact is placed on hold (paragraph 0044).

Regarding **claim(s) 6**, Cohen discloses a method, wherein assigning substantive confidence scores includes: presenting the contact with a second substantive dialog, in response to a request from the call handling system (paragraph 0046);

collecting a set of responses to the second substantive dialog from the contact (paragraph 0046);

comparing the contact's responses to the predefined body of responses associated with the set of demographic characteristics (paragraph 0046); and

assigning a second set of substantive confidence scores to the demographic characteristics (paragraph 0046).

Regarding **claim(s) 7**, Cohen discloses a method, wherein assigning substantive confidence scores includes: presenting the contact with a probing dialog (paragraph 0044);

collecting a set of responses to the probing dialog from the contact (paragraph 0046);

comparing the contact's responses to a predefined body of probing dialog responses associated with the set of demographic characteristics (paragraph 0044); and

assigning a set of probing dialog confidence scores to the demographic characteristics (paragraph 0046).

Regarding **claim(s) 8**, Cohen discloses a method, wherein presenting includes: asking the contact a set of questions associated with the demographic characteristics (paragraph 0046).

Regarding **claim(s) 9**, Cohen discloses a method, wherein assigning substantive confidence scores includes: presenting the contact with a set of multiple choice questions (paragraph 0044);

collecting a set of responses to the multiple choice questions from the contact (paragraph 0044);

comparing the contact's responses to a predefined body of multiple choice question responses associated with the set of demographic characteristics (paragraph 0046); and

assigning a set of multiple choice confidence scores to the demographic characteristics (paragraph 0047).

Regarding **claim(s) 10**, Cohen discloses a method, wherein presenting includes: presenting the contact with multiple choice questions associated with the demographic characteristics (paragraph 0044).

Regarding **claim(s) 11**, Cohen discloses a method, wherein assigning acoustic confidence scores includes: extracting an acoustic feature from the contact's speech signal (paragraph 0046); and

comparing the feature to a predefined body of speech signal features associated with the set of demographic characteristics (paragraph 0046).

Regarding **claim(s) 12**, Cohen discloses a method, wherein combining includes: weighting the confidence scores using ground truth data (paragraph 0044).

Regarding **claim(s) 13**, Cohen discloses a method, wherein weighting includes: adjusting a first confidence scores weight for a given demographic characteristic if the first confidence score differs from a second confidence score for that given demographic characteristic by a predetermined amount (paragraph 0044).

Regarding **claim(s) 14**, Cohen discloses a method, wherein combining includes: multiplying together the confidence scores for each demographic characteristic (paragraph 0046).

Regarding **claim(s) 17**, Cohen discloses a method, wherein combining includes: using a neural net to combine the confidence scores for each demographic characteristic (paragraph 0046).

Regarding **claim(s) 18**, Cohen discloses a method, wherein the neural net is a Multiple Layer Perception network (paragraph 0044).

Regarding **claim(s) 19**, Cohen discloses a method, wherein tailoring includes: identifying a sub-set of the demographic characteristics having combined confidence scores exceeding a predetermined set of thresholds (paragraph 0046); and

presenting the contact with information specifically directed to contacts having the sub-set of demographic characteristics (paragraph 0058).

Regarding **claim(s) 20**, Cohen discloses a method, wherein the predetermined threshold is equal to a highest combined confidence score (paragraph 0058).

Regarding **claim(s) 21**, Cohen discloses a method, wherein the demographic characteristics include gender, age, accent, and stress level (paragraph 0046).

Regarding **claim(s) 22**, Cohen discloses a method for extracting demographic information (paragraph 0002), comprising:

initiating a dialog between a contact and a call handling system (paragraph 0023);

selecting a set of demographic characteristics (paragraph 0044);

assigning a set of acoustic confidence scores to the demographic characteristics (paragraph 0044);

assigning a set of substantive confidence scores to the demographic characteristics (paragraph 0046);

combining the acoustic and substantive confidence scores for each of the demographic characteristics (paragraph 0046);

tailoring information presented to the contact using the set of combined confidence scores (paragraph 0058);

presenting the contact with a probing dialog (paragraph 0023);

collecting a set of responses to the probing dialog from the contact (paragraph 0044);

comparing the contact' s responses to a predefined body of probing dialog responses associated with the set of demographic characteristics (paragraph 0046);

assigning a set of probing dialog confidence scores to the demographic characteristics (paragraph 0044);

presenting the contact with a set of multiple choice questions (paragraph 0044);

collecting a set of responses to the multiple choice questions from the contact (paragraph 0044);

comparing the contact's responses to a predefined body of multiple choice question responses associated with the set of demographic characteristics (paragraph 0046); and

assigning a set of multiple choice confidence scores to the demographic characteristics (paragraph 0046).

Regarding **claim(s) 23**, Cohen discloses a computer-usable medium embodying computer program code for commanding a computer to extract demographic information (paragraph 0002), comprising:

initiating a dialog between a contact and a call handling system (paragraph 0023);

selecting a set of demographic characteristics (paragraph 0044);

assigning a set of acoustic confidence scores to the demographic characteristics (paragraph 0044);

assigning a set of substantive confidence scores to the demographic characteristics (paragraph 0044);

combining the acoustic and substantive confidence scores for each of the demographic characteristics (paragraph 0046); and

tailoring information presented to the contact using the set of combined confidence scores (paragraph 0058).

Regarding **claim(s) 24**, Cohen discloses a system for extracting demographic information (paragraph 0002), comprising a:

means for initiating a dialog between a contact and a call handling system (paragraph 0023);

means for selecting a set of demographic characteristics (paragraph 0044);

means for assigning a set of acoustic confidence scores to the demographic characteristics (paragraph 0044);

means for assigning a set of substantive confidence scores to the demographic characteristics (paragraph 0044);

means for combining the acoustic and substantive confidence scores for each of the demographic characteristics (paragraph 0046); and

means for tailoring information presented to the contact using the set of combined confidence scores (paragraph 0058).

Regarding **claim(s) 25**, Cohen discloses a system for extracting demographic information (paragraph 0002), comprising:

an Interactive Voice Response module for initiating a dialog between a contact and a call handling system, and selecting a set of demographic characteristics (paragraph 0023);

an acoustic classifier for assigning a set of acoustic confidence scores to the demographic characteristics (paragraph 0044);

a substantive classifier for assigning a set of substantive confidence scores to the demographic characteristics (paragraph 0044); and

a data combiner for combining the acoustic and substantive confidence scores for each of the demographic characteristics (paragraph 0046); and

wherein the Interactive Voice Response module further tailors information presented to the contact using the set of combined confidence scores (paragraph 0058).

Regarding **claim(s) 26**, Cohen discloses a system, wherein the substantive classifier includes: a probing dialog classifier for assigning a set of probing dialog confidence scores to the demographic characteristics (paragraph 0044); and

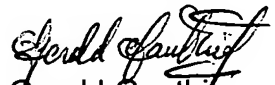
a multiple choice classifier for assigning a set of multiple choice confidence scores to the demographic characteristics (paragraph 0044).

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gerald Cohen whose telephone number is (571) 272-7539. The examiner can normally be reached on 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on (571) 272-7547. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Gerald Gauthier
Primary Examiner
Art Unit 2614

GG
February 12, 2007